BACHELOR OF COMPUTER APPLICATION
Third Semester
SOFTWARE ENGINEERING
(BCA - 12)

Duration: 3Hrs.   **Full Marks: 70**

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.   **Marks: 50**

Answer the following questions (any *five*)   **2×5=10**

a) What are the software characteristics?
b) Explain software project planning?
c) What are the characteristics of good design?
d) What does software sizing mean?
e) Differentiate between program and software?
f) What is function point? Why it is used during software developing?
g) What is software reuse? Give two advantage of software reuse?

2. Answer the following questions (any *five*)   **3×5=15**

a) What is validation and verification?
b) Explain different type application of software?
c) Explain the advantages of COCOMO model.
d) Differentiate between System Analysis and System Design.
e) Briefly explain different type of software reuse?
f) What are the characteristics of good human interface design?
g) Explain the various types of validation testing.

3. Answer the following questions (any *five*)   **5×5=25**

a) Explain waterfall model with diagram?
b) What is system testing? Explain.
c) What are the difference between black box and white box testing?
d) RAD model.
e) Spiral model.
f) What is coupling? Explain the different module coupling.
g) What is CASE tools? What are the advantages of CASE tools during software developing?

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(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes   Marks – 20

PART A- Objective Type

Answer the following multiple choice question: 1×20=20

1. Software engineering approach is used to achieve:
 a) Better performance of hardware.   b) Error free software.
 c) Reusable software.   d) Quality software product.

2. Which of the following does not compose software?
 a) Programs.   b) Hardware.
 c) Data.   d) Documentation

3. CASE stands for
 a) computer aided software engineering   b) computer add software engineering
 c) Computer aided software engineer   d) none of the above

4. If requirements are frequently changing, which model is best suited?
 a) Waterfall.   b) Spiral.
 c) Prototype.   d) RAD.

5. The output of the requirement analysis phase is
 a) SRS   b) document   c) contract   d) none of the above

6. White box testing sometime called
 a) data flow testing   b) glass box testing   c) graph testing   d) functional testing

7. Software product cost factors include:
 a) Product complexity.   b) Available time.
 c) Level of technology.   d) All the above.

8. SDLC stands for
 a) software design life cycle   b) software development life cycle
 c) system design life cycle   d) none

9. Water fall model is not suitable for
 a) Small project   b) Accommodating change   c) Complex project   d) none

10. Software engineering aims at developing
   a) reliable software
   b) cost effective software
   c) reliable and cost effective software
   d) none

11. SRS stands for
   a) systematic requirement specification
   b) system requirement specification
   c) software requirement specification
   d) none

12. DFD depicts
   a) flow of data
   b) flow of control
   c) both a and b
   d) none

13. A software is
   a) superset of programs
   b) subset of programs
   c) set of programs
   d)none

14. Which is not a product metric
   a) size
   b) reliability
   c) productivity
   d) functionality

15. The ease with which a program is tested is known as:
   a) Testability.
   b) Stability.
   c) Portability.
   d) Scalability.

16. The first level of software testing starts with:
   a) Integration testing.
   b) Unit testing.
   c) System testing.
   d) Acceptance testing.

17. In which testing approach, initially, all modules are integrated and then the entire program is tested.
   a) Incremental integration testing.
   b) Big bang testing.
   c) Stress testing.
   d) Performance testing.

18. Validation is
   a) checking the product with respect to customers expectations
   b) checking the product with respect to specification
   c) checking the product with respect to constraints of the project
   d) all of the above

19. Lower CASE tools are used for:
   a) Develop graphical user interface.
   b) For converting decision tables to source programs.
   c) For generating test cases.
   d) For developing use cases.

20. The current standard tool for designing object oriented systems is called:
   a) Unified Modelling Language.
   b) Booch Modelling Language.
   c) Object Modelling Language.
   d) Class, Responsibilities and Collaborators Language.

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